

CABIN PRESSURE CONTROL METHOD AND APPARATUS USING ALL-ELECTRIC CONTROL WITHOUT OUTFLOW VALVE POSITION FEEDBACK

ABSTRACT OF THE DISCLOSURE

A pressure control system including an inflow unit for admitting pressurized air into a cabin, an outflow unit including a motor for operating a valve to discharge air from the cabin at a predetermined rate based on an motor control signal that sets the motor speed, a control unit, and an air pressure sensor within the cabin for determining a pressure signal. The control unit receives the pressure signal and computes a pressure rate of change error signal to set the motor control signal. The outflow unit, control unit, and air pressure sensor form a feedback control loop independent of motor speed, valve speed, or valve position feedback.